REMARKS

Applicants acknowledge with appreciation the allowance of claim 158. Claim 142 is amended. Claims 1-141, 143, 145, 149, 153, 157, and 159-160 were previously cancelled. Claims 142, 144, 146-148, 150-152, 154-156, and 158 are pending in the present application.

Claim 142 was objected because of a typographical error. Claim 142 has been amended and is believed to be in immediate condition for allowance. Applicants respectfully request that this objection of claim 142 be withdrawn.

Claims 142, 144, 146-148, 150-152, and 157-156 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S Patent No. 5,320,709 ("Bowden et al.") in view of U.S. Patent No. 5,972,862 ("Torii et al.") and further in view of U.S. Patent No. 5,981,454 ("Small"). (Although not explicitly rejected in the Office Action, claims 154 and 155 will be addressed as if rejected on the same grounds since there was some discussion of these claims on page 4 of the Office Action. Additionally, claim 157 was previously cancelled and will not be addressed further.). Applicants respectfully traverse this rejection.

The claimed invention relates to a conditioning solution for removing residues remaining after a dry etch process. Claim 142 recites a conditioning solution comprising, in part, "a flourine source . . .; a complementary acid, said complementary acid being selected from the group consisting of phosphoric acid, hydrochloric acid, and combinations thereof; a non-aqueous solvent . . .; and a surface passivation agent comprising ascorbic acid, wherein said conditioning solution is substantially free of water."

Similarly, claim 150 recites a conditioning solution comprising, in part, "hydrofluoric acid or ammonium fluoride; hydrochloric acid or phosphoric acid; tetrahydrofuan or propylene carbonate; and ascorbic acid or ethylene diamine tetraacetic acid acting as a surface passivation agent, wherein said conditioning solution is substantially free of water."

The subject matter of claims 142, 144, 146-148, 150-152 and 154-156 would not have been obvious over Bowden et al. in view of Torii et al. and Small. Indeed, the Office Action fails to establish a prima facie case of obviousness. To establish a prima facie case of obviousness, three requirements must be met: (1) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine reference teachings; (2) a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. M.P.E.P. § 2142. More importantly, the teaching or suggestion to make the claimed combination and the reasonable expectation for success must both be found in the prior art and not based on Applicant's disclosure. Id. See, e.g., In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974).

Furthermore, in considering any patent as a reference for 35 U.S.C. § 103 purposes, it must be considered as a whole, including any teaching away, and further it must suggest the desirability and obviousness of combining it with the other reference. M.P.E.P. §§ 2141.01 and 2141.02 (2001) (emphasis added). References cannot be combined where a reference teaches away from their combination for the purposes of supporting a rejection under 35 U.S.C. § 103(a). M.P.E.P. § 2145.*X.D.*2. Bowden et al. does not teach or suggest all the limitations of the claimed invention. Moreover, there is no motivation to combine Bowden et al. with Torii et al. or Small to achieve the claimed invention because Torii et al. and Small both teach away from the claimed invention.

Bowden et al. relates to a method for removal of organometallic and organosilicon residues and damaged oxides using a "solution of anhydrous ammonium fluoride in a polyhydric alcohol, . . . preferably as free of water as possible." (Col. 2, lines 35-38). Bowden et al. discloses that the "absence of water prevents creation of H_3O+." (Col. 2, lines 50-51). Bowden et al. further discloses that "[e]tch rates are slower in this solution than in a solvent system including water and etching can be done selectively and with more control." (Col. 2, lines 58-60). Thus, it is important to the disclosed solution of Bowden et al. to be substantially free of water. By contrast, Torii et al. discloses "a

cleaning liquid in the form of an aqueous solution." (Col. 3, lines 2-3, 24, 28, and 41) (emphasis added). Thus Torii et al. not only does not teach or suggest its combination with Bowden et al., but teaches away from Bowden et al. and the claimed invention. These reference cannot be combined for a 35 U.S.C. § 103(a) rejection.

Small relates to a post clean treatment solution "for removal of chemical residues from metal or dielectric surfaces." (Abstract). The solution is "an aqueous solution with a pH between about 3.5 and about 7" (Abstract, emphasis added) and contains, for example, "89 parts water, 8 parts citric acid and 3 parts 50% hydroxylamine" (col. 9, lines 5-6). For the same reasoning as set forth above regarding the teachings of Torii et al., Small also does not teach or suggest its combination with Bowden et al. and teaches away from Bowden et al. and the claimed invention. Again, these references cannot be combined for a 35 U.S.C. § 103(a) rejection.

Bowden et al., individually, does not teach or suggest all the limitations of independent claim 142 or 150, as acknowledged in the Office Action at 3. Since there is no motivation to combine Bowden et al. with Torii et al. and Small (and, in fact, Torii et al. and Small teach away from Bowden et al.), independent claims 142 and 150, and the respective dependent claims 144, 146-148, 151, 152 and 154-156, would not have been obvious over the cited prior art. Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of claims 142, 144, 146-148, 150-152 and 154-156 be withdrawn.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

By_____

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